WO: 9-29-92

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

SEP 29 1992

OFFICE OF
PESTICIDES AND TOXIC
SUBSTANCES

MEMORANDUM

SUBJECT: Reregistration of Trifluralin. Summer squash field trial and cottonseed processing studies. CBRS No. 10143. DP Barcode No. D179897. MRID Nos. 42354501 and 42354502. Chemical No. 036101.

FROM: Bonnie Cropp-Kohlligian, Environmental Scientist
Reregistration Section II
Chemistry Branch II: Reregistration Support
Health Effects Division [H7509C]

THRU: E. Zager, Chief
Chemistry Branch II: Reregistration Support
Health Effects Division [H7509C]

TO: Lois Rossi/Walter Waldrop [PM-71]
Reregistration Branch
Special Review and Reregistration Division [H7508W]

Attached is the review of data submitted by DowElanco and the Trifluralin Data Development Consortium in response to reregistration requirements for cottonseed processing data and summer squash field trial data to support the cucurbit crop group tolerance. This information was reviewed by Acurex Corporation under supervision of CBRS, HED. The data assessment has undergone secondary review in the Branch and has been revised to reflect Branch policies.

It is recommended that a copy of this review be sent to the Registrant.

If you need additional input, please advise.

Attachment 1: Trifluralin CBRS No. 10143; DP Barcode D179897. Registrant's Response to Residue Chemistry Data Requirements.

cc: BLCKohlligian, Circulate, Trifluralin Reg. Std. File, SF, Acurex.
cc: RF (without attachment).
RDI: WHazel:9/23/92 EZager:9/25/92
H7509C:CBRS:BLCKohlligian:CM#2:Rm 803:703-305-7462:9/17/92.

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TRIFLURALIN
(Chemical Code 036101)
(CBRS No. 10143; DP Barcode D179897)

TASK 3

Registrant's Response to Residue Chemistry Data Requirements

August 27, 1992

Contract No. 68-DO-0142

Submitted to:

U.S. Environmental Protection Agency
Arlington, VA 22202

Submitted by:

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TRIFLURALIN

(Chemical Code 036101)

(CBRS No. 10143; DP Barcode D179897)

REGISTRANT'S RESPONSE TO RESIDUE CHEMISTRY REQUIREMENTS

Task 3

BACKGROUND

The Trifluralin Guidance Document dated 4/87 required data depicting trifluralin residues in or on cottonseed forage and cottonseed processed commodities. The Guidance Document also indicated that the established crop group tolerance for cucurbits is no longer appropriate unless residue data are submitted for summer squash, a representative commodity. In response (letter dated 7/21/89), DowElanco proposed conducting residue trials for summer squash in CA, FL, GA, NJ or NY , and TX, and conducting cotton residue trials in MS and TX that would examine residues in cotton forage and supply cottonseed for the processing study. CBRS concluded that the trial locations proposed for summer squash are adequate, but that residue trials for cotton should also include test sites in AZ and CA (S. Willett, 10/17/89). These data gaps were reiterated in the 10/91 Trifluralin Reregistration Standard Update. In response, DowElanco and the Trifluralin Data Development Consortium submitted data (1992; MRIDs 42354501 and 42354502) from a cottonseed processing study and a magnitude of the residue study on summer squash. These submissions are reviewed here to determine their adequacy in fulfilling residue chemistry data requirements. The Conclusions and Recommendations stated in this review pertain only to the magnitude of trifluralin residues in processed cottonseed commodities and summer squash.

The nature of the residue in plants and animals is adequately understood. The residues of concern in both plants and animals consist of trifluralin per se. Adequate analytical methods are available for enforcing trifluralin tolerances in plant commodities and are listed in PAM, Vol. II (Sec 180.207) as Methods II, III, and B. Tolerances for residues of trifluralin, α,α,α-trifluoro-2,6-dinitro-*N,N*-dipropyl-*p*-toluidine, in or on raw agricultural commodities are currently expressed in terms of trifluralin per se (40 CFR §180.207 and §185.5900). As there are no Codex MRLs for residues of trifluralin, there is no question with respect to Codex/U.S. tolerance compatibility.

CONCLUSIONS

1a. The data for summer squash are adequate. Trifluralin residues in or on squash were <0.01 ppm following a postemergence application of trifluralin to the soil at 0.75 lb ai/A, which is 0.75x the maximum label rate for cucurbits. These data indicate that residues of trifluralin per se are not likely to exceed the established group tolerance of 0.05 ppm for cucurbits following a 1x application. No other data are required to support the established cucurbit vegetable group tolerance.

1b. The registrant may amend trifluralin labels to include summer squash (or any other cucurbit vegetable) under the current use pattern for cucurbits.

1c. The registrant must propose PHIs for all cucurbits covered by the label. The current squash data indicate that a PHI of 30 days would be appropriate for summer squash. Data reviewed in the Trifluralin Residue Chemistry Chapter (7/85) indicate that appropriate PHIs would be 30 days for cucumbers and cantaloupe and 60 days for watermelon.

2a. The cottonseed processing study is not adequate for determining the possible concentration of trifluralin residues in commodities processed from cottonseed. Although trifluralin residues were nondetectable in cottonseed and all processed commodities, the exaggerated application rate (2.3x) was not equivalent to the maximum theoretical concentration factor demonstrated in the subject study for hulls (6x) or crude and refined oils (8x).

2b. The registrant must submit data depicting residues in cottonseed commodities processed from cottonseed bearing measurable, weathered trifluralin residues. Alternatively, the need for a processing study may be waived if a field residue test using exaggerated rates equivalent to the maximum theoretical concentration factor (8x, in this case) for the processed products indicates that cottonseed contain no detectable residues. In addition, if the use of highly exaggerated rates results in phytotoxic effects, then commodities processed from cottonseed treated at the highest possible exaggerated rate should be used for analysis of trifluralin residues.

RECOMMENDATIONS

Note to SRRD: The 40 CFR §180.207 entry for "cucurbits" should be changed to "cucurbit vegetables group" to reflect the current crop group listings and the "(N)" designation should be deleted from all entries.

DETAILED CONSIDERATIONS

Residue Analytical Methods

DowElanco and the Trifluralin Data Development Consortium submitted method descriptions (1992; MRIDs 42354501 and 42354502) along with trifluralin residue data for squash and cottonseed commodities. Trifluralin residues in or on squash and cottonseed matrices were determined using ABC Lab's Method TFN0291, a GC method using an electron capture detector (ECD). Method TFN0291 is a modification of Eli Lily Method AM-AA-CA-RO23-AA755, which was described in the 7/85 Trifluralin Residue Chemistry Chapter and is a modification of Method II in PAM, Vol II. (Sec. 180.207). Modifications in method TFN0291 include changes in the sample extraction and solvent partitioning procedures.

In method TFN0291, crop matrices (excluding oils) are extracted with methanol and filtered. The methanol extracts are then diluted with 5% NaCl, and residues are partitioned into methylene chloride and concentrated. Residues are reconstituted in hexane and cleaned- up using a florisil column eluted with hexane. Vegetable oil matrices are dissolved in hexane and residues are partitioned into acetonitrile (ACN). The ACN fraction is then partitioned with hexane:5% NaCl:water (1:1:3 v/v/v). Residues in the resulting hexane fraction are then cleaned-up using a florisil column. Residues in the florisil-purified hexane fraction are then dried, reconstituted in toluene, and analyzed by GC-ECD. The detection limit for the method is 0.01 ppm for summer squash and all cottonseed matrices.

Concurrent method recoveries were 87-110% from six untreated summer squash samples fortified with trifluralin at 0.01 ppm. In the cottonseed study, one untreated sample of each matrix was fortified with trifluralin at 0.01 ppm. Concurrent method recoveries were 100% from cottonseed, 118% from hulls, 94% from meal, 88% from soapstock, 106% from crude oil, and 100% from refined oil. Sample calculations and chromatograms were provided. These data indicate that method TFN0291 is adequate for collecting data on trifluralin residues from summer squash and all cottonseed matrices.

Storage Stability Data

DowElanco and the Trifluralin Data Development Consortium submitted data (1992; MRIDs 42354501 and 42354502) depicting the storage stability of trifluralin per se in or on squash and cottonseed commodities.

A control sample of squash from each test site was ground, fortified with trifluralin at 0.05 ppm, and stored at -20 °C prior to extraction and analysis. Recoveries of trifluralin residues were 94-108% from five samples stored for 153-159 days, and 96% from one sample stored for 227 days. Squash samples used for residue analysis in the current submission were stored for 146-210 days at $\leq$-15 °C.

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One control sample each of cottonseed, hulls, meal, crude oil and refined oil were fortified with trifluralin at 0.05 ppm and stored at -20 °C until extraction and analysis. Recoveries of trifluralin from cottonseed commodities are shown in Table 1 along with the storage intervals for cottonseed commodities used for residue analysis in the current processing study. In addition, data reviewed in the 10/91 Update indicated that trifluralin is stable at -15 °C for 557 days in cottonseed, 178 days in peanut hulls, 180 days in peanut meats, and 555 days in soybean oil.

The available storage stability data, including previous studies on cottonseed, peanuts, and soybeans indicate that trifluralin is stable in squash and cottonseed matrices stored for the intervals reflected in the current submission and adequately support the current residue data.

Table 1. Storage intervals for cottonseed commodities and recovery of trifluralin from cottonseed commodities fortified with trifluralin at 0.05 ppm and stored at -20 °C.

Matrix	Storage Interval for Fortified Samples (days)	% Recovery[a]	Storage Interval for Residue Samples (days)
Cottonseed	124	109	243
Hulls	124	109	190
Meal	124	95	177
Soapstock	-	-	331
Crude Oil	126	115	179
Refined Oil	126	72	179

[a]Not corrected for method recoveries.

Magnitude of the Residue in Plants

Cucurbit Vegetables

Summer squash. A tolerance of 0.05 ppm (N) has been established for the residues of trifluralin per se in or on cucurbits, 40 CFR §180.207. However, trifluralin is not currently registered for application to summer squash, a representative commodity of the cucurbit vegetables group. The 4 and 5 lb ai/gal EC and 10% G formulations are registered for application to cucurbits (cantaloupe, cucumber, and watermelon). Trifluralin is applied as a single postemergence application to the soil between crop rows when plants are at the three to four true leaf stage and is then incorporated into the soil. The highest recommended rate

depends on soil type and organic matter content and is shown in Table 2. This use pattern is restricted to the Western, U.S. including TX. No PHI is listed for cucurbits.

Table 2. Highest recommended label rates for cucurbits grown in different soil types[a].

Soil Texture	Soil Organic Matter Content	Highest Recommended Application Rates (lbs ai/A) Regions with <20" average annual rainfall	Regions with >20" average annual rainfall
Coarse	<2%	0.5	0.5
	2-5%	0.75	0.75
	5-10%	1.0	1.0
Medium	<2%	0.75	0.75
	2-5%	0.75	0.75
	5-10%	1.0	1.0
Fine	<2%	0.75	1.0
	2-10%	1.0	1.0

[a]Use rates were taken from labels for trifluralin 4 lb ai/gal EC and 10%G formulations (EPA Reg. Nos. 62719-93 and 62719-131).

DowElanco and the Trifluralin Data Development Consortium submitted data (1992; MRID 42354502) from five tests conducted in CA(1), FL(1), GA(1), NY(1), and TX(1) depicting trifluralin residues in or on summer squash following a postemergence application of trifluralin. Trifluralin (4 lb ai/gal EC) was applied to the soil between crop rows when plants were at the 1-4 true leaf stage and was immediately incorporated into the soil. The registrant determined trifluralin application rates using the label recommended rates for cucurbits based on the soil type at each test site (Table 3). Applications at test sites in FL, GA, and NY were below the highest recommended rates for their respective soil types, whereas CA and TX sites received an application at or above the highest recommended rate for their test sites. However, none of the test sites were treated at the maximum label rate for cucurbits (1 lb ai/A).

Table 3. Soil characteristics and the trifluralin application rate for each test site.

	Soil Characteristics		Trifluralin rate (lb ai/A)	
Test Site	Texture	% Organic Matter	Highest Recommended Rate[a]	Actual rate Applied
CA	Coarse	0.3	0.5	0.75 (0.75x)[b] (1.5x)[c]
FL	Coarse	2.1	0.75	0.5 (0.5x)[b] (0.66x)[c]
GA	Coarse	3.7	0.75	0.5 (0.5x)[b] (0.66x)[c]
NY	Medium	2.4	0.75	0.5 (0.5x)[b] (0.66x)[c]
TX	Medium	1.2	0.75	0.75 (0.75x)[b] (1.0x)[c]

[a]Based upon highest recommended rate for a given soil type.
[b]Application rate relative to the 1 lb ai/A maximum rate.
[c]Application rate relative to the highest recommended rate for a given soil type.

Each test site consisted of a control and treated plot. One control and three treated samples were harvested from each test site. Squash samples were harvested 27-37 days posttreatment, immediately frozen, and were stored at ≤-15 °C for 146-210 days. Trifluralin residues in or on squash were determined using method TFN0291. Trifluralin residues were nondetectable (<0.01 ppm) in or on 15 treated squash samples harvested 27-37 days following a postemergence application of trifluralin at 0.5x-0.75x the maximum label rate. Apparent residues of trifluralin in or on five control samples were also nondetectable (<0.01 ppm).

Geographic representation is adequate. The test states of CA(13%), FL(19%), GA(6%), NY(4%), and TX(8%) accounted for approximately 50% of the US squash acreage in 1987 (1987 Census of Agriculture, p. 372). CBRS previously concluded that these states adequately represent the growing regions for summer squash (S. Willett, 10/17/89). Although the registrant did not apply trifluralin at the maximum label rate (1 lb ai/A) for cucurbits, the current data indicate that trifluralin residues are not likely to exceed the established tolerance (0.05 ppm) for cucurbits following a single postemergence application at 1 lb ai/A, because applications at 0.75 lb ai/A resulted in residues <0.01 ppm. No further data are required for summer squash or the cucurbits vegetable group.

Miscellaneous Commodities

Cottonseed Processed Commodities. A tolerance of 0.05 ppm (N) has been established for the residues of trifluralin per se in or on cottonseed, 40 CFR §180.207. Trifluralin is currently registered on cotton for a single pre- or postemergence application that is incorporated into the soil. The highest recommended use rate depends on soil type and soil organic matter content. The highest recommended rates for normal use are the same as those listed for squash in Table 2. A postemergence application to the soil can be made up to 90 days prior to harvest. In addition, trifluralin special use directions, for the control of Johnsongrass, indicate that trifluralin can be applied preplanting in spring for two consecutive years at rates of 1, 1.5, and 2 lb ai/A to coarse, medium, and fine soils, respectively.

DowElanco and the Trifluralin Data Development Consortium submitted data (1992; MRID 42354501) from a test conducted in TX depicting trifluralin residues in or on cottonseed and in processed cottonseed commodities. Trifluralin (4 lb ai/gal EC) was applied preplanting at 4.5 lb ai/A and was incorporated into the soil, which was classified as a sandy clay loam soil (medium texture). The registrant characterized the application rate as being 3x the recommended label rate. However, because the maximum label rate is 2 lb ai/A, CBRS considers the rate tested to be 2.3x the maximum label rate.

Trifluralin was applied 9 days prior to planting and the cotton crop was harvested 128 days posttreatment. A single sample was harvested from both the control and the treated plots. Cottonseeds were processed into hulls, meal, soapstock, crude oil, and refined oil fractions using a simulated commercial process. Based on the weight of the cottonseed and each of the resulting processed fractions, theoretical concentration factors demonstrated in the subject study for residues in hulls, meal, and oils were 6x, 2x, and 8x, respectively. All samples were stored at approximately -20 °C for the intervals indicated in Table 1 until extraction and analysis. Trifluralin residues were determined using method TFN0291. A single control and treated sample were analyzed for each cottonseed commodity. Trifluralin residues were nondetectable (<0.01 ppm) in or on all treated cottonseed and processed samples. Apparent residues of trifluralin in or on all control samples were also nondetectable (<0.01 ppm).

These data are not adequate for determining the possible concentration of trifluralin residues in commodities processed from cottonseed. Although trifluralin residues were nondetectable in cottonseed and all processed commodities, the exaggerated application rate (2.3x) was not equivalent to the maximum theoretical concentration factor demonstrated in the subject study for hulls (6x) or crude and refined oils (8x). To determine the possible concentration of trifluralin residues, cottonseed commodities processed from cottonseed bearing measurable weathered residues must be analyzed. Alternatively, the need for a processing study may be waived if field residue tests using exaggerated rates equivalent to the maximum theoretical concentration factor for the processed products (8 x 2 lb ai/A = 16 lb ai/A) indicate that cottonseed contain no detectable residues. If the use of highly exaggerated rates results in phytotoxic effects, then commodities processed from cottonseed treated at the highest

possible exaggerated rate should be used for analysis of trifluralin residues. The Trifluralin Residue Chemistry Chapter (7/85) indicated that residue trials for cottonseed have been conducted at rates up to 8 lb ai/A (4x).

References

Citations for the MRID documents referenced in this review are presented below. Submissions reviewed in this document are indicated by shaded type.

42354501 Rice, F.; Gresham, M. (1992) Magnitude of the Trifluralin Residues in Cotton Processed Commodities: Final Report: Lab Project Number: 38639: AAC9040. Unpublished study prepared by ABC Labs, Inc. and South Texas Ag Research. 134 p.

42354502 Rice, F.; Schwab, D.; Gresham, M. (1992) Magnitude of the Trifluralin Residues in Summer Squash Raw Agricultural Commodities: Final Report: Lab Project Number: 40032: AAC9015. Unpublished study prepared by ABC Labs, Inc. 199 p.

Agency Memoranda

CBRS No. None
Subject: Trifluralin Registration Standard Follow-up. DEB Response to Elanco Letter dated 7/21/89.
From: S. Willett
To: L. Rossi
Dated: 10/17/89
MRID(s): None.

TRIFLURALIN (0179/036101)
TENTATIVE RESIDUE CHEMISTRY DATA SUMMARY THROUGH 9/92[1]
REASSESSMENT OF U.S. TOLERANCES AND POTENTIAL FOR HARMONIZATION WITH CODEX[2]

Guideline Number and Topic[3]	Phase V data requirements satisfied?[4]	MRID(s)[5]
171-3 Directions for use	No	
171-4(a) Plant Metabolism	Yes	
171-4(b) Animal Metabolism	Yes	
171-4(c) Residue Analytical Methods - Plants	Yes	
171-4(d) Residue Analytical Methods - Animals	No	
171-4(e) Storage Stability	No	
171-4(k) Crop Field Trials		
171-4(k) Root and Tuber Vegetables Group[6]		
Carrots	Yes	
Potatoes [see 171-4(l)]	Yes	
Sugar beets [see 171-4(l)]	Yes	
Turnips	Yes	
171-4(k) Leaves of Root and Tuber Vegetables		
Turnip tops	Yes	
171-4(k) Bulb Vegetables Group		
Garlic	Yes	
Onions (dry bulb)	Yes[7]	
171-4(k) Leafy Vegetables (except Brassica)		
Celery	Yes	
Upland Cress	No	
171-4(k) Brassica Leafy Vegetables Group		
Broccoli	Yes	
Brussels sprouts	Yes	
Cabbage	Yes	
Cauliflower	Yes	
Collards	Yes	
Kale	Yes	
Mustard greens	Yes	
171-4(k) Legume Vegetables (succulent/dried)		
Adzuki Beans	Yes	
Beans (dried)	Yes	
Field Peas (Cowpeas, Black-eyed peas)	Yes	
Guar Beans [see 171-4(l)]	Yes	
Mung Beans	Yes	
Peas (succulent and dried)	Yes	
Snap Beans	Yes	
Soybeans [see 171-4(l)]	Yes[8 9 10 11 12]	
171-4(k) Foliage of Legume Vegetables		

TRIFLURALIN (0179/036101)
TENTATIVE RESIDUE CHEMISTRY DATA SUMMARY THROUGH 9/92[1]

REASSESSMENT OF U.S. TOLERANCES AND POTENTIAL FOR HARMONIZATION WITH CODEX[2]

Guideline Number and Topic[3]	Phase V data requirements satisfied?[4]	MRID(s)[5]
Bean vines and hay	Yes	
Pea vines and straw	Yes	
Soybean forage, hay and straw	Yes	
171-4(k) Fruiting Vegetables Group		
Peppers	Yes	
Tomatoes [see 171-4(l)]	Yes	
171-4(k) Cucurbit Vegetables Group		
Cantaloupes	Yes	
Cucumbers	Yes	
Summer Squash	No[13]	42354502
Watermelons	Yes	
171-4(k) Citrus Fruits Group		
Grapefruit	Yes	
Lemons	Yes	
Oranges [see 171-4(l)]	Yes	
Tangeloes	Yes	
Tangerines	Yes	
171-4(k) Stone Fruits Group		
Apricots	Yes	
Nectarines	Yes	
Peaches	Yes	
Plums (fresh prunes) [see 171-4(l)]	Yes	
171-4(k) Small Fruits and Berries Group		
Grapes [see 171-4(l)]	Yes	
171-4(k) Tree Nuts Group		
Almonds	Yes	
Pecans	Yes	
Walnuts	Yes	
171-4(k) Cereal Grains Group		
Barley [see 171-4(l)]	Yes[14]	
Corn (field) [see 171-4(l)]	No[15]	
Sorghum [see 171-4(l)]	Yes[16]	
Wheat [see 171-4(l)]	Yes	
171-4(k) Forage, Fodder, and Straw of Cereal Grains		
Barley forage, hay, and straw	Yes	
Corn forage, fodder, and silage	No	
Sorghum forage, fodder, silage, and hay	No	
Wheat forage, hay, and straw	No	
171-4(k) Non-grass Animal Feeds		
Alfalfa forage and hay [see 171-4(l)]	No[17]	

TRIFLURALIN (0179/036101)
TENTATIVE RESIDUE CHEMISTRY DATA SUMMARY THROUGH 9/92[1]

REASSESSMENT OF U.S. TOLERANCES AND POTENTIAL FOR HARMONIZATION WITH CODEX[2]

Guideline Number and Topic[3]	Phase V data requirements satisfied?[4]	MRID(s)[5]
171-4(k) Miscellaneous Commodities		
Asparagus	Yes	
Cottonseed [see 171-4(l)]	No	
Flax [see 171-4(l)]	No	
Hops [see 171-4(l)]	Yes	
Mustard seed	No	
Peanuts [see 171-4(l)]	No	
Peppermint [see 171-4(l)]	No	
Rape seed	Yes[18]	
Safflower seed	Yes	
Spearmint [see 171-4(l)]	No	
Sugarcane [see 171-4(l)]	No[19 20]	
Sunflower seed and forage [see 171-4(l)]	No	
171-4(l) Processed Food/Feed		
Corn, Field	No	
Cotton	No[21]	42354501
Oranges	No	
Peanuts	No	
Peppermint	No	
Potato	No[22]	
Sorghum, grain	Yes[23]	42325001
Soybeans	No	
Spearmint	No	
Sugar beets	No[24]	
Sugarcane	No	
Sunflower	No	
Wheat	No	
171-4(j) Meat/Milk/Poultry/Eggs	No	
171-4(f) Potable Water	N/A	
171-4(g) Fish	N/A	
171-4(h) Irrigated Crops	N/A	
171-4(i) Food Handling Establishments	N/A	
171-5 Reduction of Residues	N/A	

[1]Registration Standard issued 7/3/85. Reregistration Standard Update issued 10/29/91.

[2]There are no Codex MRLs for residues of trifluralin. Therefore, the question of compatibility between Codex and U.S. tolerances is rendered moot.

[3]N/A = Guideline requirement not applicable.

[4]Applies to List B only; List A chemicals were not subject to Phase IV of FIFRA '88.

[5]MRIDs that were reviewed in the current submission are designated in shaded type.

[6]CBRS 7827 by P. Deschamp dated 4/25/91. Registrant proposed conducting field trials in CA and FL to determine residues in/on radishes and processing studies on potatoes and sugar beets to support tolerance for members of the Root and Tuber Vegetables Group (excluding carrots).

[7]CBRS 8771 by N. Dodd dated 12/30/91. Registrant submitted a Section 3 label amendment for trifluralin on onions. No new residue data were submitted.

[8]CBRS 8832 by W. Chin dated 12/6/91. Registrant requested an amended use. No new residue data were submitted.

[9]CBRS 8560 by N. Dodd dated 3/10/92. Registrant requested an EUP for XRM-5313 on soybeans. No new residue data were submitted.

[10]CBRS 9506 by N. Dodd dated 6/12/92. Registrant requested a label amendment. No new residue data were submitted.

[11]CBRS 9845 by N. Dodd dated 8/20/92. Registrant submitted amendment to its petition for temporary tolerances in/on soybeans.

[12]CBRS 8400 and 8646 by N. Dodd dated 3/27/92. Registrant proposed temporary tolerances for residues of trifluralin in/on field corn fodder, corn forage, corn grain and soybeans. Storage stability data were submitted which demonstrated that residues of DE-498 are stable in/on soybeans for up to 411 days when stored frozen (MRID 419317). Storage stability data submitted on field corn forage, fodder, and grain (MRID 419317-21) were deemed inadequate for evaluation. Field corn magnitude studies (MRID unspecified) were conducted at 16 locations in 13 states but CBTS deemed them inadequate. No corn processing data were submitted. Soybean field trials were conducted (MRID 419521-06, 419317-19, and 419317-20) but CBTS deemed them inadequate. No soybean processing data were submitted.

[13]CBRS 10143 by B. Cropp-Kohlligian dated 9/28/92. The field trial data for summer squash are adequate to support a cucurbits vegetable group tolerance.

[14]CBRS 9453 by N. Dodd dated 7/2/92. CBTS review of supplemental label for trifluralin on barley. No new residue data submitted.

[15]CBRS 5966 by W. Anthony dated 1/29/90. Label amendment request. No new residue data submitted.

[16]CBRS 5966 by W. Anthony dated 1/29/90. Label amendment requested. No new residue data submitted.

[17]CBRS 9501 by N. Dodd dated 8/6/92. Registrant requested a label amendment. No new residue data were submitted.

[18]CBRS 8833 by W. Chin dated 11/22/91. Registrant requested a label amendment. No new residue data were submitted.

[19]CBRS 7063 by W. Anthony. Label amendment requested. No new residue data submitted.

[20]CBRS 8074 by W. Anthony dated 7/22/91. Label amendment requested. Registrant cited residue data (MRID No. 413067-01) which was submitted and reviewed in the Trifluralin Reregistration Standard Update (10/29/91). No additional data submitted.

[21]CBRS 10143 by B. Cropp-Kohlligian dated 9/28/92. The submitted cottonseed processing study is not adequate. The registrant must submit data depicting residues in cottonseed commodities processed from cottonseeds bearing measureable trifluralin residues or conduct field trial studies at exaggerated application rates equivalent to the maximum theoretical concentration factor (8x).

[22]CBRS 7827 by P. Deschamp dated 4/25/91. Registrant proposed conducting field trials in CA and FL to determine residues in/on radishes and processing studies on potatoes and sugar beets to support tolerance for members of the Root and Tuber Vegetables Group (excluding carrots).

[23]CBRS 9991 by B.Cropp-Kohlligian dated 9/28/92. Registrant submitted adequate grain sorghum processing data. Trifluralin residues are not likely to concentrate in flour or starch. Food Additive Tolerances are not required. No additional grain sorghum data are required.

[24]CBRS 7827 by P. Deschamp dated 4/25/91. Registrant proposed conducting field trials in CA and FL to determine residues in/on radishes and processing studies on potatoes and sugar beets to support tolerance for members of the Root and Tuber Vegetables Group (excluding carrots).

cc: BLCKohlligian; Trifluralin Reregistration Standard File; Lois Rossi, SRRD.